

IMPROVED HALL-CURRENT ION SOURCE**ABSTRACT OF THE DISCLOSURE**

In accordance with one specific embodiment of the present invention, a Hall-current ion source of the end-Hall type has an anode that is contoured with one or more recesses in the electron-collecting surface which have areas that are protected from the deposition of externally generated contamination thereon, as well as one or more protrusions that have higher temperatures than the bulk of the anode, thereby increasing the removal or passivation of coatings during operation by the thermal degradation of the coating and the effects of thermomechanical stresses.

In another specific embodiment, which can be combined with the above embodiment, electrically isolated baffle or baffles are located to protect a substantial fraction of the electron-collecting surface of the anode from the deposition of externally generated contamination thereon.